

In The Claims

23. (Once Amended) A computer-implemented method for estimating market value of a used vehicle, the method comprising:

A) receiving data from a nearest neighbor database consisting of a number K of used vehicle nearest neighbor records, each used vehicle nearest neighbor record comprising resale information and a plurality of used vehicle features, at least one target used vehicle record comprised of a plurality of used vehicle features, at least one constraint for determining a neighbor relationship between a pair of used vehicles, and a neighborhood distance function for determining a distance between a pair of used vehicles, the number K is iteratively selected for estimation accuracy based on a historical database of N used vehicle records; and

B) determining an estimated value for the at least one target used vehicle based on the data from the nearest neighbor database, the at least one target used vehicle record, the at least one constraint, and the neighborhood distance function,

wherein the estimated value of the at least one target used vehicle is relied upon by individuals to at least price used vehicles for resale.

24. (Once Amended) The method of claim 23 wherein the determining step includes the use of neural networks.

26. (Once Amended) The method of claim 23, wherein determining step B) is comprised of:

B1) for each used vehicle nearest neighbor record in the nearest neighbor database, determining a weighted estimated value for the used vehicle nearest neighbor based on the data from the nearest neighbor database, the at least one target used vehicle record, the at least one constraint, and the neighborhood distance function; and

B2) determining an estimated value for the at least one target used vehicle based on the weighted estimated values for the number K of used vehicle nearest neighbors.

31. (Once Amended) The method of claim 30, wherein the at least one used vehicle record further comprises resale plan information.

33. (Once Amended) A computer-implemented method for estimating market value of a used vehicle, the method comprising:

A) receiving data which includes:

V_1 comprised of a number N of v_1 , each v_1 comprising resale information and f_1 , V_2 comprised of at least one v_2 , each v_2 comprised of f_2 , Const, F_d , K , and $Error_p$;

B) determining an $Error_K$ based on V_1 , Const, F_d , and K ; and

C) if $Error_K$ is less than about $Error_p$, then

C1) determining an estimated value for each v_2 in V_2 based on V_1 , V_2 , Const, F_d , and K ;

C2) setting K to K plus 1 and $Error_p$ to $Error_K$; and

C3) looping to step B),

wherein:

V_1 equals data from a historical database comprised of a number N of used vehicle records,

v_1 equals a used vehicle record in V_1 ,

f_1 equals a plurality of vehicle features of v_1 ,

V_2 equals a data set comprised of at least one target used vehicle record,

v_2 equals a target used vehicle record,

f_2 equals a plurality of vehicle features of v_2 ,

Const equals an at least one constraint for determining a neighbor relationship between a pair of used vehicles,

F_d equals a neighborhood distance function for determining a distance between a pair of used vehicles,

K equals a nearest neighbor value,

$Error_p$ equals a previous estimation error, and

$Error_K$ equals a used vehicle market error,

wherein the estimated value of each v_2 in V_2 is relied upon by individuals to at least price used vehicles for resale.

35. (Once Amended) The method of claim 33 wherein step B) is comprised of:

- B1) for each v_1 in V_1 ,
 - B11) determining a neighbor group V' of K used vehicles v' for v from V_1 based on Const , F_d , and f_1 ;
 - B12) for each v' in V' , determining a weighted estimated value for v_1 based on v' , f_1 and F_d ;
 - B13) determining an estimated value for v_1 based on each weighted estimated value of v_1 ;
 - B14) determining an estimated error for v_1 based on the estimated value for v_1 and the resale price of v_1 ; and
- B2) determining Error_K based on the estimated error for each v_1 in V_1 , and N .

36. (Once Amended) The method of claim 33 wherein step C1) is comprised of:

- for each v_2 in V_2 ,
 - C11) determining a nearest neighbor group V'' of K used vehicles v'' for v_2 from V_1 based on Const , F_d , f_1 , and f_2 ;
 - C12) for each v'' in V'' , determining a weighted estimated value for v_2 based on v'' , F_d , f_1 , and f_2 ;
 - C13) determining an estimated value for v_2 based on each weighted estimated values of v_2 .

37. (Once Amended) The method of claim 36 further comprising C14) storing v_2 with the estimated value for v_2 in a data set V_3 of used vehicles v_3 with estimated market values.

38. (Once Amended) The method of claim 33, wherein f_1 , and f_2 include at least two items selected from the group consisting of vehicle type, model, series, trim level,

engine type, transmission type, moon roof equipped, leather interior, interior color, and exterior color.

40. (Once Amended) The method of claim 39, wherein each v_2 further comprises planned resale information, wherein the planned resale information includes at least one item selected from the group consisting of intended resale date, region and resale channel.

41. (Once Amended) The method of claim 33, wherein the determining step C1) includes the use of neural networks.